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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/713,956	11/13/2003	Boaz Carmeli	GB920020070US1	7288

35525 7590 10/31/2007
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EXAMINER

PHAN, TUANKHANH D

ART UNIT	PAPER NUMBER
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2153

MAIL DATE	DELIVERY MODE
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10/31/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/713,956	Applicant(s) CARMELI ET AL.	
	Examiner TuanKhanh Phan	Art Unit 2153	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 August 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32,36-51 and 53-54 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-32,36-51,53 and 54 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

The amendment, filed on 8/16/2007, has been entered and acknowledged by the Examiner. Cancellation of claims 33-35 and 52 has been entered. Claims 1-32, 36-51, and 53-54 are pending in the instant application.

Response to Arguments

Applicant's arguments filed 8/16/2007 have been fully considered but they are not persuasive.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e. responsive to the timer expiring) is read as existing a time *t* in the execution (p. 43, last para.) of gossiping for response message in Sun.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e. designating a first subscriber to register interest in a topic as a primary subscriber) is read as subscriber provides subscriptions that filter against the subject field to extract interested events and topics in the subject field (p. 13, para 1).

In response to applicant's argument that the reference fails to show the active connection is a TCP/IP connection. It is noted that the Internet protocols of any Internet network must follow the TCP/IP connection standards set by ISO. Thus, the Internet (Figure 3-1) referred by Sun falls within the standards of TCP/IP. Applicant's arguments are not persuasive.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102(b) that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-33, 36-51 and 53-54 are rejected under 35 U.S.C. 102(b) as being anticipated by Sun ("Reliable Multicast for Publish/Subscribe Systems").

Regarding claims 1, 17, 36, and 44, Sun anticipates a publish/subscribe messaging system/method (abstract) comprising: wherein the at least one broker (Figure 3-1) has means for sending a status request message (abstract) to the at least one subscriber (p. 14),

means, responsive to each subscriber receiving the status request message from the at least one broker, for setting a timer for each subscriber of the at least one subscriber, and

means, responsive to the timer expiring, for sending a multicast message claiming response to the at least one broker from a particular subscriber of the at least one subscriber (pp. 30-31).

Regarding claims 2, 18, 37, and 45, Sun anticipates the publish/subscribe messaging system of claims 1, 17, 36 and 44, further comprising means for sending a status response message from the particular subscriber to the at least one, wherein the

status response message is an indication of liveness of the at least one subscriber (pp. 30-31, "liveness").

Regarding claims 3 and 19, Sun anticipates the publish/subscribe messaging system of claim 1, further comprising means for listening on a multicast channel by the at least one broker, and means for determining an indication of non-liveness from failure to receive a response the at least one subscriber (pp. 30-31).

Regarding claims 4, 20, 38, and 46, Sun anticipates the publish/subscribe messaging system of claims 2, 18, 37, and 45 wherein the means for sending the status response message from the particular subscriber to the at least one broker further comprises means, responsive to the particular subscriber sending the status response message, for **suppressing** sending of a separate status response message from another subscriber of the at least one subscriber (Figure 3-3; p. 29, ¶ 2-3; p. 30). Sun further describes situation where only one sender i and receiver j pair is permitted (pp. 29-30).

Regarding claims 5, 21, 39 and 47, Sun anticipates the publish/subscribe messaging system of claims 4, 20, 38, and 46 wherein sending the status response message is responsive to sending the multicast message claiming response, and wherein the means for suppressing sending (p. 15, lines 1-8; Figure 3-3; p. 29, ¶ 2-3; p. 30) further comprise means, responsive to the another subscriber of the least one subscriber receiving the multicast message claiming response, for canceling the timer (p. 43) and discarding the status request message for the another subscriber (section 4.3; p. 40; p. 42).

Regarding claims 6 and 22, Sun anticipates the publish/subscribe messaging system of claims 5 and 21 further comprising means, responsive to the at least one broker failing to receive the multicast message claiming response from the at least one subscriber, for re-sending the status request message (p. 42, "gossip recovery").

Regarding claims 7 and 23, Sun anticipates the publish/subscribe messaging system of claims 4 and 20 wherein the means for suppressing further comprise: means, responsive to a desired plurality of subscribers of the at least one subscriber sending the status message, for suppressing sending (pp. 29-30) of the status response message from the another subscriber (Figure 3-3).

Regarding claims 8 and 24, Sun anticipates the publish/subscribe messaging system of claims 7 and 23 wherein the status request message comprises a parameter representative of the desired plurality of subscribers, wherein sending the status response message is responsive to sending the multicast message claiming response, and wherein the means for suppressing sending of the separate status response message from the another subscriber (p. 15, lines 108; pp. 29-30) further comprises: means, responsive to the another particular subscriber receiving the multicast message claiming response from the desired plurality of subscribers, for canceling the timer and discarding (section 4.3) the status request message for the another particular subscriber (pp. 40-41).

Regarding claims 9 and 25, Sun anticipates the publish/subscribe messaging system of claims 1 and 17 wherein the timer has a random duration (p. 15, lines 1-8, "randomizing the delays").

Regarding claims 10 and 26, Sun anticipates the publish/subscribe messaging system of claims 1 and 17 further comprising: means for maintaining an active connection between the particular subscriber and the at least one broker, wherein the active connection is established during registration, (abstract; Figure 3-1; p. 15, last ¶), and means for indicating liveness to the at least one broker using the active connection (abstract; Figure 3-1; p. 15, last ¶).

Regarding claims 11 and 27, Sun anticipates the publish/subscribe messaging system of claims 10 and 26. See discussions of claims 1-3 and 17-19 above.

Regarding claims 12 and 28, Sun anticipates the publish/subscribe messaging system according to claims 1 and 17, wherein the at least one broker is arranged to designate as a first subscriber to register interest in a topic (p. 13) as a primary subscriber, and to maintain an active connection to the primary subscriber for sending the status request message directly to the primary subscriber, and to designate (p. 43) a different subscriber as a new primary subscriber in response to a failure of the primary subscriber to send an indication of liveness and in response to the different subscriber sending the indication of liveness (p. 43).

Regarding claims 13 and 29, Sun anticipates the publish/subscribe messaging system of claims 10 and 26 wherein the active connection is a TCP/IP connection (Figure 3-1).

Regarding claims 14 and 30, Sun anticipates the publish/subscribe messaging system of claims 1 and 17 wherein the status request message is piggybacked onto another multicast publication message (p. 15, ¶ 1).

Regarding claims 15 and 31 Sun anticipates the publish/subscribe messaging system of claims 1 and 17 wherein the indication of liveness is sent over one of: a UDP connection (Figure 3-1); and a TCP connection (Figure 3-1). It is inherent that an Internet connection encompasses UDP and TCP connections.

Regarding claims 16 and 32 Sun anticipates the publish/subscribe messaging system of claims 15 and 31 wherein the connection over which the indication of liveness is sent (Figure 3-1) is arranged to escalate autonomously from a UDP connection in response to an absence of responses to the at least one broker within a chosen time period (p. 43).

Regarding claim 40, Sun anticipates the system of claim 38, wherein the means for suppressing further comprises: means, responsive to a desired plurality of subscribers of the at least one subscriber sending of the status response message is arranged to suppressing sending of the separate status response message from the another subscriber (p. 15, "suppressing").

Regarding claim 41, Sun anticipates the system of claim 40 wherein the the status request message comprises representative of the desire plurality of subscribers, wherein sending the status response message comprises is responsive to sending the multicast message claiming response (Figure 3-1), and wherein the means for suppressing sending of the separate status response message from the another subscriber further comprises: means, responsive to the another particular subscriber receiving the multicast message claiming response from the desired plurality of

subscribers, for canceling the timer and discarding the status request message (p. 43) for another particular subscriber (p. 43).

Regarding claim 42, Sun anticipates the system of claim 36 further comprising: means for maintaining an active connection between the particular subscriber and the broker, wherein the active connection is established during registration (p. 13, Figure 3-1); and means for indicating liveness to the broker using the active connection (p. 43).

Regarding claim 43, see discussion of claim 36 in reference with claims 11 and 27.

Regarding claim 48, Sun anticipates the method of claim 46 wherein the suppressing further comprises: responsive to a desired plurality of subscribers of the plurality of subscribers sending the status response message, suppressing sending of the separate status response message from another subscriber (p. 15).

Regarding claim 49, Sun anticipates the method of claim 48, wherein the status request message comprises a parameter representative of the desired plurality of subscribers, wherein sending the status response message is responsive to sending the multicast message claiming response, and wherein suppressing sending of the separate status response message from the another subscriber further comprises: (p. 15, "suppressing"): responsive to the another subscriber receiving the multicast message claiming response from the desired plurality of subscriber, canceling the timer and discarding the status request message from the another subscriber (p. 43).

Regarding claim 50, Sun anticipates the method of claim 44 further comprising: maintaining an active connection between the particular subscriber and the broker,

wherein the active connection is established during registration (abstract; Figure 3-1; p. 15, last ¶); and indicating liveness to the broker using the active connection (Figure 3-1).

Regarding claim 51, Sun anticipates the method of claim 50 further comprising: sending a status response message from the particular subscriber to the broker to indicate the liveness (Figure 2-2), responsive to the particular subscriber sending the status response message suppressing sending of a separate status response message from another subscriber, and wherein the suppressing further comprises: responsive to determining that the particular subscriber has the active connection to the broker, performing one of sending the status response message to the broker via the active connection (section 4.1), and the multicast message claim response and the status response message to the broker via the active connection upon the expiry of the timer (Figure 4-1

Regarding claim 53, Sun anticipates the method of claim 17, further comprising: responsive to sending the multicast message claiming response and responsive to an absence of an active connection between the particular subscriber and the at least one broker, establishing the active connection to the at least one broker and sending a status response message to the at least one broker via the active connection (section 4.1).

Regarding claim 54, Sun anticipates the publish/subscribe messaging system of claim 1, further comprising: responsive to sending the multicast message claiming response and responsive to an absence of an active connection between the particular

subscriber and the at least one broker, establishing the active connection to the at least one broker and sending a status response message to the at least one broker via the active connection (section 4.1)

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TuanKhanh Phan whose telephone number is 571-270-3047. The examiner can normally be reached on Mon to Fri, 8:00am to 4:30pm EST, 1st Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenton B. Burgess can be reached on 571-272-3949. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2153

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TKP


THU HA NGUYEN
PRIMARY EXAMINER